



7555-01-P

## NATIONAL SCIENCE FOUNDATION

### Agency Information Collection Activities: Comment Request

**AGENCY:** National Science Foundation.

**ACTION:** Submission for OMB Review; Comment Request.

**SUMMARY:** The National Science Foundation (NSF) has submitted the following information collection requirement to OMB for review and clearance under the Paperwork Reduction Act of 1995. This is the **second notice** for public comment; the first was published in the *Federal Register*, and 136 comments were received from eight different institutions/individuals, along with one comment from one institution/individual on the Financial Data Collection Tool for Major Facilities. NSF is forwarding the proposed submission to the Office of Management and Budget (OMB) for clearance simultaneously with the publication of this second notice. The full submission may be found at:

<http://www.reginfo.gov/public/do/PRAMain>.

**DATES:** Comments regarding this information collection are best assured of having their full effect if received by [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*].

**FOR FURTHER INFORMATION CONTACT:** Office of Information and Regulatory Affairs of OMB, Attention: Desk Officer for National Science Foundation, 725 - 17<sup>th</sup> Street, N.W. Room 10235, Washington, D.C. 20503, and Suzanne H. Plimpton, Reports Clearance Officer, National Science

Foundation, 2415 Eisenhower Avenue, Alexandria, VA 22314, or send email to [splimpto@nsf.gov](mailto:splimpto@nsf.gov). Individuals who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1-800-877-8339, which is accessible 24 hours a day, 7 days a week, 365 days a year (including federal holidays).

Copies of the submission may be obtained by calling 703-292-7556.

**SUPPLEMENTARY INFORMATION:** NSF may not conduct or sponsor a collection of information unless the collection of information displays a currently valid OMB control number and the agency informs potential persons who are to respond to the collection of information that such persons are not required to respond to the collection of information unless it displays a currently valid OMB control number.

Comments regarding (a) whether the collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility; (b) the accuracy of the agency's estimate of burden including the validity of the methodology and assumptions used; (c) ways to enhance the quality, utility and clarity of the information to be collected; (d) ways to minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology should be addressed to the points of contact in the FOR FURTHER INFORMATION CONTACT section.

## **Summary of Comments on the National Science Foundation's Major Facilities Guide:**

The draft Major Facilities Guide and Financial Data Collection Tool for Major Facilities were made available for review by the public on the NSF website at [https://www.nsf.gov/bfa/lfo/lfo\\_documents.jsp](https://www.nsf.gov/bfa/lfo/lfo_documents.jsp). In response to the Federal Register notice published December 21, 2018, at 83 FR 65757, NSF received 136 comments from 8 different institutions/individuals on the Major Facilities Guide and 1 comment on the Financial Data Collection Tool for Major Facilities from 1 institution/individual. A summary of the comments on the Major Facilities Guide follows:

- 48 requested further guidance on project management controls and NSF oversight processes and procedures for major facilities and mid-scale projects;
- 20 requested clarification on the processes and requirements associated with cost and contingency through the various stage of the facility lifecycle;
- 24 requested clarification on the guidance for cybersecurity programs for major facilities;
- 6 requested clarifications on guidance for mid-scale projects;
- 8 requested clarifications of requirements during the various stages of the facility lifecycle;
- 8 provided general observations; and
- 22 provided editing recommendations such as typos and sentence structure.

The full comments and NSF's response may be found via:

[http://www.reginfo.gov/public/do/PRAMain\\_and](http://www.reginfo.gov/public/do/PRAMain_and)

[https://www.nsf.gov/bfa/lfo/lfo\\_documents.jsp](https://www.nsf.gov/bfa/lfo/lfo_documents.jsp). NSF is moving forward with submitting the information collection request to OMB.

*Title of Collection:* Major Facilities Guide.

*OMB Number:* 3145-0239.

*Overview of this Information Collection:*

The National Science Foundation Act of 1950 (Public Law 81-507) set forth NSF's mission and purpose:

“To promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense. \* \* \*”

The Act authorized and directed NSF to initiate and support:

- Basic scientific research and research fundamental to the engineering process;
- Programs to strengthen scientific and engineering research potential;
- Science and engineering education programs at all levels and in all the various fields of science and engineering;
- Programs that provide a source of information for policy formulation; and
- Other activities to promote these ends.

Among Federal agencies, NSF is a leader in providing the academic community with advanced instrumentation needed to conduct state-of-the-art research and to educate the next generation of scientists, engineers and technical workers. The knowledge generated by these tools sustains U.S.

leadership in science and engineering (S&E) to drive the U.S. economy and secure the future. NSF's responsibility is to ensure that the research and education communities have access to these resources, and to provide the support needed to utilize them optimally and implement timely upgrades.

The scale of advanced instrumentation ranges from small research instruments to shared resources or facilities that can be used by entire communities. The demand for such instrumentation is very high, and is growing rapidly, along with the pace of discovery. For major facilities and shared infrastructure, the need is particularly high. This trend is expected to accelerate in the future as increasing numbers of researchers and educators rely on such major facilities, instruments, and databases to provide the reach to make the next intellectual leaps.

NSF currently provides support for facility construction from two accounts: the Major Research Equipment and Facility Construction (MREFC) account, and the Research and Related Activities (R&RA) account. The MREFC account, established in FY 1995, is a separate budget line item that provides an agency-wide mechanism, permitting directorates to undertake major facility projects are roughly \$70M or greater. Smaller projects continue to be supported from the R&RA Account.

Facilities are defined as shared-use infrastructure, instrumentation and equipment that are accessible to a broad community of researchers and/or educators. Facilities may be centralized or may consist of distributed installations. They may incorporate large-scale networking or computational

infrastructure, multi-user instruments or networks of such instruments, or other infrastructure, instrumentation and equipment having a major impact on a broad segment of a scientific or engineering discipline. Historically, awards have been made for such diverse projects as accelerators, telescopes, research vessels and aircraft, and geographically distributed but networked sensors and instrumentation.

The growth and diversification of major facility projects require that NSF remain attentive to the ever-changing issues and challenges inherent in their planning, construction, operation, management and oversight. Most importantly, dedicated, competent NSF and awardee staff are needed to manage and oversee these projects; giving the attention and oversight that good practice dictates and that proper accountability to taxpayers and Congress demands. To this end, there is also a need for consistent, documented requirements and procedures to be understood and used by NSF program managers and awardees for all such major projects.

*Use of the Information:* Facilities are an essential part of the science and engineering enterprise, and supporting them is one major responsibility of the National Science Foundation (NSF). NSF makes awards to external entities – primarily universities, consortia of universities or non-profit organizations – to undertake construction, management and operation of facilities. Such awards frequently take the form of cooperative agreements. NSF does not directly construct or operate the facilities it supports. However, NSF retains responsibility

for overseeing their development, management and successful performance.

The Major Facilities Guide is intended to:

- Provide step-by-step guidance for NSF staff and awardees to carry out effective project planning, management and oversight of major facilities while considering the varying requirements of a diverse portfolio;
- Clearly state the policies, processes and procedures pertinent at each stage of a facility's life cycle from development through construction, operations, and termination; and
- Document and disseminate “good practices” identified over time so that NSF and awardees can carry out their responsibilities more effectively.

This version of the Major Facilities Guide (previously referred to as the *Large Facilities Manual*) reflects changes in terminology to align with the American Innovation and Competitiveness Act (AICA) terminology; adds a section for guidance on mid-scale research infrastructure projects; updates NSF policy on research infrastructure, roles and responsibilities for NSF staff, divestment stage, earned value management, cybersecurity, and property management; and clarifies cost estimating requirements. The Guide does not replace existing formal procedures required for all NSF awards, which are described in the, *Proposal & Award Policies & Procedures Guide (PAPPG)*. Instead, it draws upon and supplements it for the purpose of providing detailed guidance on NSF policy and procedures related to the planning and management of Major Facilities. All facilities projects require merit and technical review, as well as approval of certain deliverables. The level of review and approval varies substantially from

standard grants, as does the level of oversight needed to ensure appropriate and proper accountability for federal funds. The requirements, recommended procedures and best practices presented in the Guide apply to any facility significant enough to require close and substantial interaction with the Foundation and the National Science Board.

This Guide will be updated periodically to reflect changes in requirements, policies and/or procedures. Award Recipients are expected to monitor and adopt the requirements and best practices included in the Guide which are aimed at improving management and oversight of major facilities projects and at enabling the most efficient and cost-effective delivery of tools to the research and education communities.

The submission of proposals and subsequent project documentation to the Foundation related to the development, construction and operations of Major Facilities is part of the collection of information. This information is used to help NSF fulfill this responsibility in supporting merit-based research and education projects in all the scientific and engineering disciplines. The Foundation also has a continuing commitment to provide oversight on facilities development and construction which must be balanced against monitoring its information collection so as to identify and address any excessive reporting burdens.

NSF has approximately twenty-four (24) Major Facilities in various stages of development, construction, operations and termination. Facilities undergoing a major upgrade may be classified in both design or construction and operations at the same time. Two to four (2 to 4) new awards are made

approximately every five (5) years based on science community infrastructure needs and availability of funding. Among the twenty-four major facilities, there are approximately seven (7) facilities annually that are either in development or construction. These stages require the highest level of reporting and management documentation per the *Major Facilities Guide*. NSF estimates there will be four (4) mid-scale projects in progress at a given time.

*Burden on the Public:* The Foundation estimates that approximately five (5) Full Time Equivalents (FTEs) are necessary for each major facility project in design or construction to respond to NSF performance and financial reporting and project management documentation requirements on an annual basis; or 10,400 hours per year. The Foundation estimates approximately one and half (1.5) FTE for a major facility in operations to respond to NSF performance and financial reporting on an annual basis; or 3,120 hours per year. For mid-scale projects, the Foundation estimates approximately one (1) FTE is necessary for each mid-scale project to respond to NSF project management documentation requirements on an annual basis; or 2,080 hours per year. With seven (7) major facilities in design or construction and twenty-one (21) in operations and four (4) mid-scale projects, this equates to roughly 150,000 public burden hours annually.

**Dated:** June 6, 2019.

**Suzanne H. Plimpton,**  
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